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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,194	02/18/2004	Yoshinori Ichishi	4041J - 000838	1758
27572	7590	08/25/2006	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			BANKHEAD, GENE LOUIS	
			ART UNIT	PAPER NUMBER
			3744	

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/781,194	ICHISHI ET AL.	
	Examiner	Art Unit	
	Gene L. Bankhead	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

10 July 2006

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 2, 5, 7, 8, 11-13, 15-18, 20, 23-24, 26 and 28-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1, 3, 6, 10, 19, 21, 25, 27 and 30 is/are rejected.
- 7) ☐ Claim(s) 4, 9, 14 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/18/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claim 2, 5, 7,8,11-13,15-18,20, 23-24,26 and 28-29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected open state window determining means, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 10, 2006.

Applicant's election without traverse of claims 1,3,4,6,9,10,14,19,21,22,25,27 and 30 in the reply filed on July 17, 2006 is acknowledged.

Claim Objections

Claim 14 is objected to because of the following informalities:

The recitation "based on the temperature detected at the last time", (claim 14, line 5), is believed to be --based on the temperature detected--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "near" (claim 3, line 3) and "close" (claim 22, line 7) are relative terms which render the claims indefinite. The terms "near" and "close" are not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is not clear from the term "near", as recited in claim 3, how close the light emitting device is to the temperature sensor. From the claim language "near" could mean the temperature sensor and light emitting device are adjacent to one another, both in the passenger compartment or simply both in the vehicle. It is not clear from the term "close", as recited in claim 22, how close the detected non-contact temperature sensor temperature must be to the outside air temperature. From the claim language "close" could mean within 1 degree, 10 degrees, or greater. For this office action the term "near" has been interpreted to be the light emitting device and the temperature sensor are both in the vehicle. The term "close" has been interpreted to be the detected temperature and the outside temperature are within 5 degrees of one another.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,3,6,19,25,27, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Noji et al (US 5157932).

Regarding claim 1, Noji et al. teach a passenger compartment temperature sensor 42 and a control unit 31. The control unit generates airflow into the passenger compartment based on the temperature detected by the passenger compartment sensor (column 4 lines 1-15, 52-57 and column 5 lines 22-25). Note the compartment temperature sensor is used to calculate the target outlet temperature, and that the airflow rate is generated in accord with the target outlet temperature (column 4 lines 52-57).

Noji et al. further teach a control algorithm, see Figure 5, used as a determining means for determining whether the compartment temperature sensor has detected an abnormal temperature; indicating the vehicle is too hot or too cold (column 3 lines 68-70 and columns 4 and 5 lines 1-65 respectively). Noji et al. teach an abnormal temperature as an target outlet temperature less than T_{α} in step S6 or greater than T_{β} in step S8. Note that the compartment temperature sensor is used to calculate the target outlet temperature TAO (column 4 lines 1-12), and that the target outlet temperature is used to determine if the vehicle compartment is too hot (column 5 lines 1-10 and 26-32) or too cold (column 6 lines 1-13).

They further teach a notifying means 53 capable of notifying a passenger when the determining means has sensed an abnormal temperature (column 5 lines 26-32 and column 6 lines 8-15). Though Noji et al. do not explicitly teach that the compartment

temperature sensor is a non-contact temperature sensor, from Figure 2 it is inherent the temperature sensor 42 does not touch the passenger, and thus is in non-contact.

With regard to claim 3, Noji et al. teach the indicator is a light emitting device (column 8 lines 12-17 and Figures 6A to 6C) near the compartment temperature sensor, see Figure 3. Note examiner considers the indicator near the compartment temperature sensor, as the requisite degree of the term "near" (claim 3 line 3) has not been specified.

Regarding claim 6, Noji et al. teach all claim limitations of claim 1 and further teach an environment condition detection means 43 for detecting an amount of compartment solar radiation present (column 3 lines 35-40). They further teach the control unit generates an airflow rate into the passenger compartment based on the temperature detected by the insolation sensor 43 in addition to the temperature detected by the passenger compartment (column 4 lines 1-15, 52-57 and column 5 lines 22-25). They further teach the determining means determines whether the temperature detected by the non-contact temperature sensor is normal based on the temperature detected by the insolation sensor (column 4 lines 1-15, 52-57 and column 5 lines 22-25). Note the detected insolation sensor temperature is used to calculate the target outlet temperature, and that the target outlet temperature is used to determine if an abnormal temperature is present in steps S6 and S8.

In regard to claim 19, Noji et al. teach a vehicle air conditioner with a passenger compartment temperature sensor 42, a control unit 31, and an environment condition detection means 43, which detects an amount of compartment solar radiation present

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(column 3 lines 35-40). The control unit generates airflow into the passenger compartment based on the temperature detected by the passenger compartment sensor and solar radiation sensor (column 4 lines 1-15, 52-57 and column 5 lines 22-25). Note the compartment temperature sensor and solar radiation sensor are used to calculate the target outlet temperature, and that the airflow rate is generated in accord with the target outlet temperature (column 4 lines 52-57). Noji et al. further teach a control algorithm, see Figure 5, used as a determining means for determining whether the compartment temperature sensor has detected an abnormal temperature; indicating the vehicle is too hot or too cold (column 3 lines 68-70 and columns 4 and 5 lines 1-65 respectively).

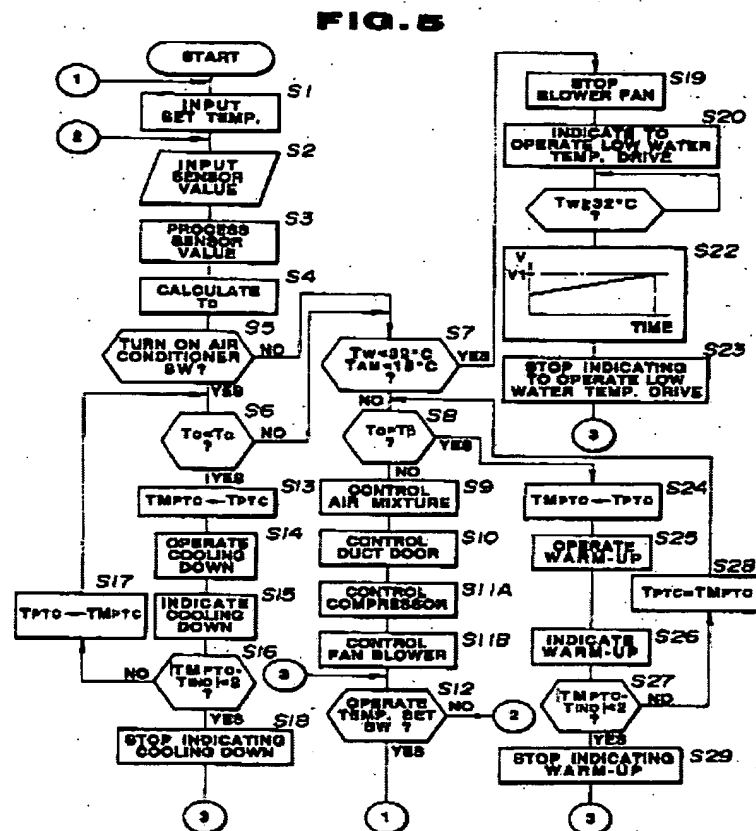


Figure 5 Noji et al. (US 557932)

Noji et al. teach an abnormal temperature as an outlet temperature less than T_{α} in step S6 or greater than T_{β} in step S8. Note that the compartment temperature sensor is used to calculate the target outlet temperature TAO (column 4 lines 1-12), and that the target outlet temperature is used to determine if the vehicle compartment is too hot (column 5 lines 1-10 and 26-32) or too cold (column 6 lines 1-13).

They further teach a notifying means 53 capable of notifying a passenger when the determining means has sensed an abnormal temperature (column 5 lines 26-32 and

column 6 lines 8-15). Though Noji et al. do not explicitly teach that the compartment temperature sensor is a non-contact temperature sensor, from Figure 2 it is inherent the temperature sensor 42 does not touch the passenger, and thus is in non-contact.

Regarding claim 21, see the rejection of claim 10 as claims cite similar subject matter.

With regard to claim 25, Noji et al. teach the claimed process, as previously discussed.

In regard to claims 27, Noji et al. teach the claimed process, as previously discussed.

With regard to claim 30, Noji et al. further teach a notifying means 53 capable of notifying a passenger when the determining means has sensed an abnormal temperature (column 5 lines 26-32 and column 6 lines 8-15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1,3,6,10,19,21,25,27, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noji et al. in view of Kamiya et al. (US 6202934).

Regarding claims 1,3,6,19,21,25,27 and 30 Noji et al. anticipate the claims as previously stated, Kamiya et al. further teach a vehicle air conditioner with a non-contact temperature sensor 70a for detecting a passenger compartment temperature (column 5 lines 6-15). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Noji et al. with the non-contact temperature sensor of Kamiya et al. because non-contact temperature sensors are able to detect temperatures over a wider region of the passenger compartment and more quickly than simple contact sensing temperature sensors. It is well known in the art that non-contact infrared temperature sensors are an excellent means for detecting temperature without direct contact at a very fast speed.

With regard to claims 10 and 21, Noji et al. teach all claim limitations however fail to explicitly teach a predetermined area with a plurality of temperature detection ranges. Kamiya et al. teach a plurality of temperature detection ranges A to P, (column 5 lines 12-20 and Figure 2), in the passenger compartment. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Noji et al. with the plurality of detection ranges of Kamiya et al. to advantageously detect a greater area of the passenger compartment, as a greater detection region ensures a more accurate temperature measurement.

Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noji et al. in view of Kamiya et al. in further view of Omura (US 5408837).

Noji et al. in view of Kamiya et al. teach all limitations of claim 1, as previously stated, however they fail to teach a determining means that determines the temperature

detected by the non-contact temperature sensor is abnormal based on a temperature detected a time before a present time and a temperature detected at the present time. Omura teaches an air conditioning system wherein an air temperature sensor 13 detects a temperature at two predetermined times apart from one another and compares both detected temperatures to each other with a comparator 15 (column 2 lines 58-68 and column 3 lines 1-20). Omura further teaches an abnormal detection signal output if the temperatures detected at both times are more than a predetermined value apart from one another (column 3 lines 25-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Noji et al. determining means with the control algorithm of Omura to advantageously alert a passenger of a vehicle when an abnormal temperature has been detected over a period of time instead of at just one point in time, as sudden spikes or jumps in temperature are not an indication an abnormal condition is present. Only when a temperature has elevated above an abnormal temperature region for a period of time is an abnormal condition present.

Allowable Subject Matter

Claim 22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

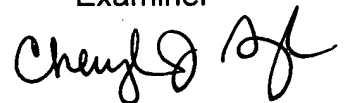
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gene L. Bankhead whose telephone number is (571)-272-8963. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571)-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GB
Art Unit 3744
Examiner



CHERYL TYLER
SUPERVISORY PATENT EXAMINER